

REMARKS

By the present Amendment, claims 11, 15 and 18 are amended. This leaves claims 11-20 pending in the application, with claim 11 being independent.

Priority Claim

Certified copies of both German priority applications were filed with the European Patent Office (EPO) in Munich, Germany on March 29, 2007, as evidenced by the attached document with the EPO confirmation stamp. Additionally, submitted herewith is a copy of the allegedly missing certified copy of German Application No. 103 31 215.3. If this copy is not adequate, an original certified copy will be obtained and filed.

Rejections Under 35 U.S.C. §§102 and 103

Claim 11 covers a fluid cooling device comprising a drive motor 10, a rotatable fan wheel 12, a first fluid pump 14 or 16, a reservoir tank 20 and a heat exchanger 24. The fan wheel is driven by the drive motor. The fluid pump is driven by the drive motor, is mounted on a shaft line jointly with the fan wheel, and is located coaxially between the drive motor and the fan wheel. The reservoir tank is formed of plastic material and contains a fluid conveyable into a working circuit that heats the fluid in operation of the working circuit. Parts of the reservoir tank at least partially enclose the fan wheel and form a fan housing. The reservoir tank has a bottom-side trough part 30 and an upright-side trough part 32 seated on and extending vertically on the bottom-side trough part. The bottom-side trough part and the upright-side trough part are integrally connected and form a hollow collar 34 in which the fan wheel is rotatably mounted. The bottom-side trough part has a longitudinal extension equal to at least the overall length of a

combination of the drive motor and the first fluid pump. The heat exchanger receives and cools fluid returning to the reservoir tank from the working circuit.

By forming the cooling device in this manner, the fan wheel, fluid pump and drive motor are aligned in that order along a single shaft line and are integrated with the trough parts to enclose the fan wheel and, particularly with the bottom-side trough part to project in a manner to cover the fan wheel, pump and motor. This claimed arrangement creates an independent structural unit that is efficient in its structure and protects the fan wheel, pump and motor during assembly and operation and counteracts damaging vibrations.

Claims 11, 14 and 16-29 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,290,473 to Thome in view of U.S. Patent No. 5,649,587 to Plant. The Thome patent, in Fig. 3, is alleged to disclose a cooling device including a drive motor 10, a rotatable fan wheel 12 driven by the motor, a first fluid pump 14 driven by the motor and mounted on the shaft with the fan wheel and a reserve tank 16 of plastic material. Parts of the Thome reserve tank allegedly at least partially enclose the fan wheel and form a fan housing. The Thome tank allegedly has a bottom side trough part and upright trough part that are integrally connected with the bottom side trough part allegedly having a longitudinally extension equal to the overall length of the combination of the drive motor and the first pump. A heat exchanger 20 allegedly receives and cools the fluid returning to the reservoir from a working circuit. Thome Fig. 5 is cited as allegedly showing a tank with plural chambers. Use of the motor to drive additional pumps is alleged to be obvious. The Plant patent is cited for teaching a combined fan shroud and fluid tank including a bottom side trough and an upside trough forming a hollow collar in which the fan wheel is rotatably mounted. In view of the Plant patent, it is alleged that it would be obvious

to provide the Thome cooling device with a hollow collar in which the fan wheel is rotatably mounted.

Claims 12, 13 and 15 stand rejected under 35 U.S.C. §103 as being unpatentable over the Thome and Plant patents, when further considered in view of U.S. Patent No. 6,871,697 to Albright. The Albright patent is cited for disclosing a collar 68A, 40A delimiting a first opening covered by and facing the heat exchanger 46, 48, 50 with its first cross sectional area being larger than a second cross sectional area facing the drive motor and fan wheel (Fig. 9) and with the heat exchanger including first and second heat exchangers. In support of the rejection, it is alleged that it would be obvious in view of the Albright patent to form the Thome heat exchanger with a hollow collar delimiting a first opening covered by and facing the heat exchanger, a first cross sectional area being larger than the cross sectional area facing the drive motor and fan wheel and with the heat exchanger including first and second heat exchangers.

Claim 11 is patentably distinguishable over the Thome, Plant and Albright patents, considered individually or in any obvious combination thereof by the specifically claimed order of the motor, pump and fan, particularly in combination with the other structural features recited in this independent claim.

The Thome patent discloses a fluid cooling device having a motor 10, a fan wheel 12 and a pump 14 arranged in that order, as shown in Fig. 3. In contrast, the present claimed invention requires that the motor and pump be on the same side of the fan such that they can be exposed to the circulation of air in a same manner. Such exposure is not possible with the arrangement of the Thome patent.

These deficiencies in the Thome patent are not cured by the Plant and/or Albright patents. The Albright patent only shows a fan 14 with a motor 72, with no pump being disclosed or

shown in combination with the fan and motor. The Albright patent has a fan 64 and a fan motor 70, again without any combination with a pump. Since the Plant and Albright patents do not disclose pumps in combinations with motors and fans, it cannot supply the deficiency discussed above of the unobvious and claimed motor-pump-fan arrangement.

Also, the Plant patent at best only discloses a cooling device having a rectangular hollow body with dual openings with cylindrical walls 22 and 23. A radiator 12 is located on one side of the hollow body. A fan 14 with a motor 72 is mounted in each opening. Each fan is driven by a motor 72. The fan and motor are supported by a bracket 64 such that the motor is located outside of and extends beyond the hollow body 18, as clearly illustrated in Figs. 3 and 4. No pump is cited as being disclosed. Thus, the Plant patent does not teach the subject matter of claim 11 relative to the claimed bottom-side trough part extending at least over the length of the drive motor and first fluid pump in combination with the claimed upright-side trough part.

Accordingly, claim 11 is patentably distinguishable over the cited patents.

Claims 12-20 being dependent upon claim 11, are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents.

Claim 12 is further distinguishable by the first and second openings delimited by the hollow collar.

Claim 13 is further distinguished by the first cross-sectional area being larger than the second cross-sectional area and the tapering of the air guide surface between those openings.

Claim 14 is further distinguished by the first and second tank chambers at least partially separated from one another. No such tank chambers are disclosed or rendered obvious by the Thome and Plant patents. No evidence supports the allegation of obviousness.

Claim 15 is further distinguished by the first and second fluid pumps and first and second heat exchangers to provide for two fluids. No such arrangement is alleged to be disclosed in the cited patents, such that no such evidence in the record supports the allegation of obviousness.

Claim 16 is further distinguished by the tank openings, particularly within the overall claimed combination.

Claim 17 is further distinguished by the tank being formed by rotational molding. No such tank formation is disclosed. The cited patents only appear to disclose blow molding.

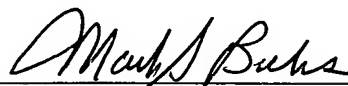
Claim 18 is further distinguished by a second pump driven by the motor drive and located between the drive motor and fan wheel. No arrangement one or two pumps relative to the drive motor and fan wheel is disclosed in the Thome, Plant and Albright patents.

Claim 19 is further distinguished by each of the bottom-side trough part and the upright-side trough part being substantially rectangular.

Claim 20 is further distinguished by the L-shape formed by the trough parts.

In view of the foregoing, claims 11-20 are allowable. Prompt and favorable action is solicited.

Respectfully submitted,



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